

Statement of Basis
Class V Area Permit Renewal
UIC Permit Number UTU-35AP-38871EB

Jordan Valley Water Conservancy District
8215 South 1300 West
West Jordan, Utah 84088-0070

Description of Permitted Facility

Jordan Valley Water Conservancy District (JWCD) operates an aquifer recharge and recovery system as an integral part of their public water supply system. The purpose of the recharge and recovery system is:

- 1) To capture high quality mountain stream runoff water that is un-stored and otherwise un-captured, treat it, and store it underground for later use;
- 2) To release stored Deer Creek Reservoir water during the low demand period that would otherwise spill and cause excessively high flows in the down-gradient channel, convey the water to a treatment plant, treat it, and store it underground for later use;
- 3) To increase the peak demand delivery capacity within Salt Lake County; and
- 4) To stabilize the declining elevation of ground water in the aquifer in southeastern Salt Lake County.

This aquifer recharge and recovery system includes 19 wells to inject water into the unconfined zone of the principal aquifer of the Salt Lake Valley. The project is located between 700 to 2700 East and 6800 to 9800 South in southeastern Salt Lake County. Water is taken from Deer Creek Reservoir, the Provo River, the Central Water Project, the Southwest Groundwater Project, and five Salt Lake County mountain streams, and then treated via a combination of six water treatment plants prior to injecting it. The bulk of the injected water will be recovered during periods of high demand, typically, but not limited to July, August, and September.

Basis for Requiring Permit

Under UAC R317-7-5.5 the Director of the Utah Division of Water Quality is authorized to call for a permit for any Class V injection well that may endanger an underground source of drinking water. Since the source waters (see below) may be subject to spills or deliberate dumping of contaminants, it is the determination of the Director that the proposed injection of water as described above should be permitted.

Injection Fluid Limitations

- a. Fluid injected through all wells is expressly limited to water from:
Deer Creek Reservoir, Provo River, Bell Canyon Creek, Middle Fork Dry Creek, South Fork Dry Creek, Big Willow Creek, Rocky Mouth Creek, Central Water Project, and Southwest Groundwater Project.
- b. Prior to injection the water shall be fully treated by the Jordan Valley Water Treatment Plant, the Southeast Regional Water Treatment Plant, the Southwest Water Treatment Plant, the Little Cottonwood Water Treatment Plant, the Don A. Christiansen Water Treatment Plant or the Point of the Mountain Water Treatment Plant.
- c. Injected water shall meet all Federal and State Maximum Contaminant Levels for Drinking Water (MCLs), and State Ground Water Quality Standards. The maximum total dissolved solids (TDS) of injected water shall not exceed 500 milligrams per liter (mg/l).
- d. The permittee shall not inject any hazardous waste as defined by UAC R315-2-3 or 40 CFR 261 at any time during operation of the facility.
- e. All additives introduced into the injection stream must meet all Utah Rules for Public Drinking Water Systems found in UAC R309-525-11.5.
- f. The permittee shall notify the Director in writing within 10 days of any changes in the injection fluid or process additives that may alter the quality or chemical composition of the injection fluid.
- g. Upon notification of a spill or dumping incident which may adversely affect the quality of the injectate or any finding by the permittee or the Director that the injection fluid has exceeded Federal or State MCLs, State Ground Water Quality Standards, TDS of 500 mg/l, or may otherwise adversely affect the health of persons, the permittee shall stop injection immediately at all affected or potentially affected wells. Injection shall not recommence until approval has been received by the Director.

Injection Pressure and Volume Limitations

Injection pressure shall be limited to prevent flowing artesian conditions in the extraction or monitoring wells. The injection volume is limited by the Ground Water Recharge Permit issued by the Utah Division of Water Rights. No additional restrictions on the injection volume are imposed by the Utah UIC Program.

Monitoring, Testing and Reporting

- a. Injectate Characterization – A representative sample of the water being injected will be analyzed for a complete suite of parameters for each quarter during which injection occurs. The suite of parameters and schedule are specified in Attachment G of the Permit.
- b. Operating Parameters – Injection volume, pressure, and flow rate will be monitored and recorded on continuous recording devices. Hydrostatic head will be measured and recorded for each

injection well immediately before the commencement of each injection event, immediately after each injection event, and monthly when the injection event lasts long enough.

- c. Reporting – Results of the monitoring and testing will be submitted in quarterly reports.

Plugging and Abandonment of Recharge Well

After the recharge wells cease to be employed as a Class V injection wells, the permittee shall plug and abandon the wells according to an approved Plugging and Abandonment Plan that meets the requirements of the Utah Division of Water Rights and Utah Division of Drinking Water.

Financial Assurance for Plugging and Abandonment

The permittee is not required to maintain financial responsibility and resources to plug and abandon the permitted injection well facilities beyond that which is required by the Utah Division of Water Rights and the Utah Division of Drinking Water.

Permit Reopener Provision

This permit may be reopened and modified (following proper administrative procedures) if new water quality standards are finalized during the life of the permit, if new regulations are adopted by the Utah Water Quality Board, if the Director determines that the list of monitoring parameters or the monitoring schedule should be revised, or if the Director determines that the injection activity is having an adverse impact on public health.